

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 29-31, 33-37, 39, and 40 are pending in the present application, Claims 29 and 35 having been amended. Support for the present amendment is found, for example, at page 23, line 14 to page 24, line 15, and page 35, lines 3-5. Applicants respectfully submit that no new matter is added.

In the outstanding Office Action, a requirement for information was made under 35 CFR §1.105l ; the specification was objected to; Claims 29-40 were rejected under 35 U.S.C. §112, first paragraph; Claims 29, 30, 33-36, 39, and 40 were rejected under 35 U.S.C. §102(b) as anticipated by Geradts et al., *Methods for Identification of Images Acquired with Digital Cameras* (hereinafter Geradts); Claims 31 and 37 were rejected under 35 U.S.C. §103(a) as unpatentable over Geradts in view of Chen et al., *Symmetric Phase Only Matched Filtering of Fourier-Mellin Transforms* (hereinafter Chen); and Claims 32 and 38 were rejected under 35 U.S.C. §103(a) as unpatentable over Geradts in view of Schipper et al. (U.S. Patent No. 5,764,770, hereinafter Schipper).

REQUEST FOR INFORMATION

The request for information under 37 C.F.R. § 1.105 was addressed in a filing made on July 14, 2008.

RESPONSE TO OBJECTIONS AND REJECTIONS

With respect to the objection to the specification and the rejection under 35 U.S.C. §112, first paragraph, the claims were amended to remove the language objected to in the Office Action in an Amendment filed on July 14, 2008 (which was entered according to the Advisory Action mailed July 28, 2008). Accordingly, these grounds of objection and rejection are believed to have been overcome.

Applicants respectfully submit that amended Claim 29 recites novel features neither disclosed nor rendered obvious by the applied art. Amended Claim 29 recites, *inter alia*,

a correlation detection unit configured to detect the variations in strength of different light receiving elements, the different light receiving elements having distinctive variations in light receiving intensity due to an etching mask.

As discussed in the specification, each light receiving element has an aperture that varies in shape. Thus, the light receiving elements have distinctive variations in light receiving intensity due to an etching mask. Page 24 of the present specification describes how the distinctive variations are “like a fingerprint.” Also, the effects of the distinctive light receiving sensitivity appear in the image data generated by the camera.

Further, in another non-limiting embodiment of the invention, effects of lens imaging, noise, and quantization can be avoided through averaging.¹

For example, the amount of light striking the photo-electric conversion region of the silicon substrate 12 in Applicant’s Fig. 2 varies and, therefore, the light receiving sensitivity varies depending on the light receiving element. The invention defined by Claim 29 identifies whether the first image was generated by the image generating apparatus based on the correlation detected by the correlation detection section. In other words, the invention defined by Claim 29 identifies whether the first image was generated by the image generating apparatus by using the variations in shape of the light that impinges on the different light receiving elements.

Geradts uses a correlation between defects in a CCD to determine if a particular apparatus created an image. Geradts states “We have looked into different methods of examining the cameras to determine if a specific image has been made with a camera; **defects in CCDs, file formats that are used, noise introduced by the pixel arrays and**

¹ Specification, page 34, line 21 to page 35, lines 5.

watermarking in images used by the camera manufacturer” (emphasis added).² Thus, Geradts is concerned with defects in CCDs.

Geradts compares a pattern of defective CCD elements, and is not concerned with the distinctive variations in light receiving intensity due to an etching mask. In Geradts, there is no analysis regarding distinctive variations in light receiving intensity due to an etching mask. The only analysis is based on whether the CCD element is defective or not. The defects that Geradts is concerned with are not unique like a fingerprint. There is no disclosure or suggestion in Geradts that any consideration is given to the distinctiveness of any of the defects.

Thus, Geradts does not disclose or suggest the claimed

a correlation detection unit configured to detect the variations in strength of different light receiving elements, the different light receiving elements having distinctive variations in light receiving intensity due to an etching mask.

Chen describes a two-dimensional matching technique based on the symmetric phase-only matched filtering of the Fourier-Mellin invariant descriptors of the images. Chen does not cure the above-noted deficiencies in Geradts as Chen is not concerned with “the variations in strength of different light receiving elements, the different light receiving elements having distinctive variations in light receiving intensity due to an etching mask.”

Schipper describes a digital camera that conceals image authentication information concerning the circumstances of formation of the digital image of a selected view within the image itself. The image authentication information includes location information and/or angular orientation information and/or information on time of image formation and/or distance from the digital camera to a selected object in a viewfinder of the camera. The image authentication information is encoded into an image by individually altering pixels to contain parts of the authentication information. Authentication of the image is provided by

² Geradts, abstract.

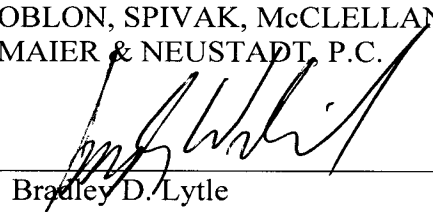
comparing the position information contained in the digital image with position information that is stored elsewhere. Schipper does not cure the above-noted deficiencies of Geradts.

In view of the above-noted distinctions, Applicants respectfully submit that Claim 29 (and any claims dependent thereon) patentably distinguish over, Geradts, Chen, and Schipper, taken alone or in proper combination. Applicants respectfully submit that Claim 35 recites elements analogous to those of amended Claim 29. Applicants respectfully submit that Claim 35 patentably distinguishes over, Geradts, Chen, and Schipper, taken alone or in proper combination, for at least the reasons stated for Claim 35.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Bradley D. Lytle
Attorney of Record
Registration No. 40,073

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

Joseph Wrkich
Registration No. 53,796